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Newspaper Attendance System for Daily, Weekly, Fortnight and Monthly Issues

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Abstract: *Newspaper Attendance System is mainly built for regulating and maintaining the flow of registering newspaper and magazines on daily basis. The main purpose of this project is to reduces human involvement, human effort, saves time and money. This system contains an Integrated methodology for segmenting newspaper page and identifying newspaper articles using Image processing [3]. In a First stage, a succession of image processing algorithm is employed for segmenting newspaper page images into various objects (text, images, drawings and titles) [3].*

Key words: Image processing, Android, OpenCV, Data extraction, Newspaper management, Monthly review, attendance management.

1. Introduction

In current scenario, India has numerous small scale and large scale Newspaper agencies who publish Magazines and Newspaper in various regions as well as in various native languages. In every district, submission process of Newspaper copy to their perspective district level office or zonal level office may vary from one state to another. For understanding it in better way, let's take an example of Gujarat state in which the submission process of Newspaper copy to office is mention as: Newspaper agency registered under I & B have to submit physical copy of published magazines or Newspaper to District office and same copy to Gandhinagar for reference purpose. If any newspaper agency doesn't want to submit their copy to both offices, then they will not be eligible for the advertisement received by Government of Gujarat. In current scenario this process is time consuming and tedious for office. Agencies send same issue to Gandhinagar office via post. Gandhinagar office maintains a register at their end. End of year both register are matched to find any discrepancy. To resolve this one android application requires for submit both copies to respective offices and it is easy to match both copies of magazine or Newspaper from their respective ends.

The main purpose of this project is to reduces human involvement, human effort, saves time and money. In this system, daily task of sending physical copy of newspaper to government offices made easy by sending it through online system. Soft copy is in the form of pdf or document type. Both government offices verify it automatically using this system. Thus, human involvement to manage all these stuffs will be less. Data storing and retrieving is feasible on daily basis.

We are implementing image processing in this system. It will be helpful since verification of newspaper on daily basis will be feasible. This system automatically verifies newspaper based on auto scanning and verifying. So human involvement to verify one by one copies is replaced by this system.

2. Literature Review

Image Processing on Embedded Platform Android [1]: This paper presents innovative approach towards design, developing, and implementation of image processing-based application using embedded vision platform. Android provides platform for developing embedded system. By using OpenCV library, image processing-based algorithm can be implemented on android devices. By using OpenCV with android embedded vision-based system can be developed which can be replaced for machine vision-based system. Android based embedded vision system reduces size of the system and also cost-effective solution for industries. The android application presented in this paper performs basic operations like color transforms, edge detection, morphological operation etc. For implementing embedded vision image processing algorithm needs to be implemented on embedded platform. For task related to image processing OpenCV library is used. OpenCV is open source computer vision library which is image processing library developed by Intel. It is mainly written in C/C++ and also supports Java and Python. It is not dependent on operating system. It is available for all operating systems i.e. Windows, Linux, Mac. It also supports android. In this paper we can conclude that OpenCV in optimized form which improves the performance of system for processing the images.

NLP based Intelligent News Search Engine using Information Extraction from e-Newspapers [2]: Extracting text information from a web news page is a challenging task. It presents a personalized news search engine that focuses on building a repository of news articles by applying efficient extraction of text information from a web news page from varied e-news portals. In this paper, we propose a novel idea for mining information from web news pages.

Integrated Algorithms for Newspaper page Decomposition and Article Tracking [3]: In this paper, an Integrated methodology is presented for segmenting newspaper page and identifying newspaper articles. In a First stage, a succession of image processing and document analysis algorithms is employed for segmenting newspaper page images into various objects (text, images, drawings and titles). At the page segmentation phase, the newspaper image is decomposed in its basic principal components, such as text areas, titles, images and lines etc. From this paper we can conclude that newspaper pages comes in various page layouts, so additional sources of information are required in order to improve our result. A possible source is the textual contents of the segments produced by page decomposition.

Automatic News Extraction System for Indian Online News Papers [4]: This paper gives the information of how newspaper data is extracted and can be used for various purposes. Indian online news Web papers are producing more data every day on the Web. There are various technologies & researches which are focusing on the extraction of data. But still there is requirement of availability of automatic annotation of this extracted information into a systematic way so to be processed further for various purposes. This paper concludes the novel approach for extract data from online Indian newspapers written in the many popular languages such as Marathi, Hindi, Tamil, Gujarati, Telugu, Punjabi, etc.

3. Proposed work

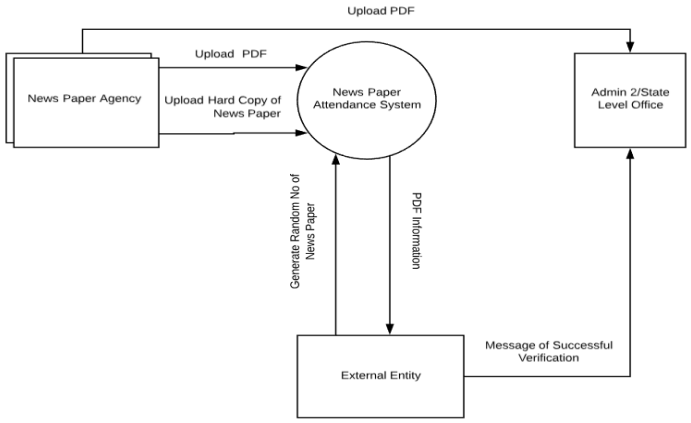
This project consists of 4 interfaces: Admin interface, implementation of database connection, Record Generation by Monthly & Yearly issues, User interface for Newspaper agency. In Admin interface includes the design and developing of Admin interface/Panel. Admin interface/Panel is responsible for each and every monitoring and other activities. This admin panel includes both District level office and Gandhinagar office. Both the offices keep and maintain record of every newspaper agency and generates monthly and yearly issues.

Database will play an important role for storing and retrieving user's data. Since information and data are very crucial things that needs to be maintained for any organization or company. In our system, storing and retrieval of data is very important for generating monthly and yearly issues. Thus, a strong database connectivity needed to maintain it.

After every end of month, both offices can look into records of all the Newspaper agency. They can also see which Newspaper agency regularly update their issues to both the offices. They can also generate record by yearly for the better evaluation.

User interface for Newspaper agency module includes designing of UI for newspaper agency. Newspaper interface includes uploading of pdf on daily basis. Agency can also check their records in the database.

4. Implementation



In our system, Agency as well as office both plays an important role. Zonal level office and Gandhinagar office have to dependent on agencies, because firstly agencies have to submit soft copies to zonal level & higher-level office. After submitting this, record will be generated; otherwise system cannot determine which agencies are beneficial for the advertisement purpose. The main purpose of this project is to reduces human involvement, human effort, saves time and money.

5. Results

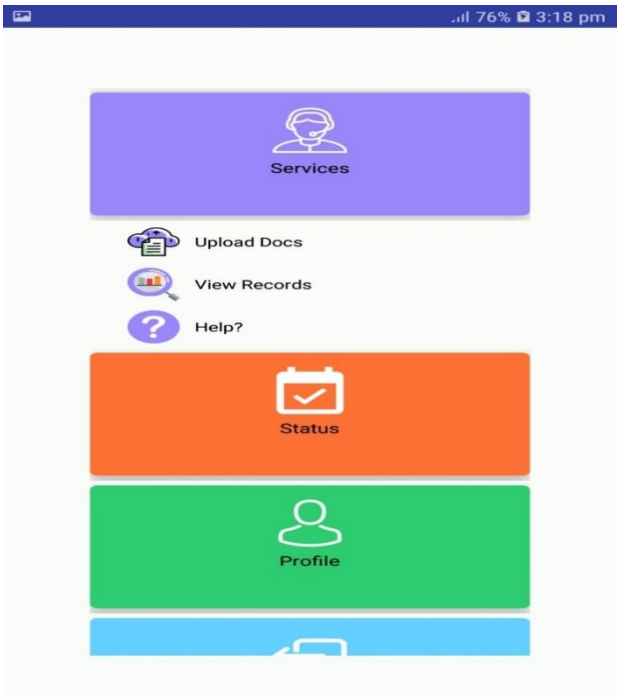


Image 1: Newspaper agency Home page

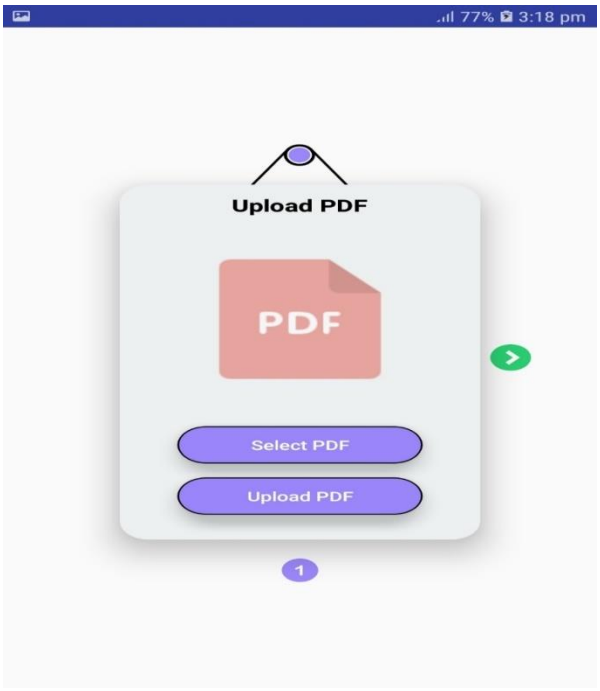


Image 2: Upload PDF page

Image 3: View records page

Image 4: Generate monthly records page

6. Conclusion

During completion of this project, we have learned new concepts and approaches to solve given problem specification. We have divided our work in the way that each member can work very efficiently. For example, if one has the ability to design pages very efficiently, then designing work will be assigned to them. If one has the potential to work with the database or backend coding or it may be analysis of product / requirement gathering, then task will be assigned according to their expertise. Main phase of our product would be automation, so we have given more time to implement it through various techniques to achieve it in better state. Also designing of a product should be user-friendly and it should be good enough. So, we have put more effort to make design beautiful and interactive. Thanks to our faculty guide who helped us in our project to deal with various complex aspects.

7. Future Scope

Currently we are implementing our product in the way that all manual task can be done automatically through our system. Although we have achieved certain point of accuracy and we are continuously working on it to achieve it in better state. Since this system will be made for Gujarat state, if it works properly and hopefully, then similar type of product can be made live for other states of India.

8. References

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